

WE CLAIM:

1. A gas regulation system comprising:
 - a source of a breathable gas;
 - a tube in communication with the source for delivering the breathable gas from the source to an individual;
 - a valve for controlling the rate of gas flow from the source to the individual for inhalation; and
 - a remote control unit for controlling the valve so as to allow the individual to adjust the rate of gas flow from the source through the tube to the individual independently from any inhalation activity by the individual,
 - wherein the system excludes any means for automatically adjusting the rate of gas flow from the source through the tube to the individual according to the level of physical activity of the individual.
2. The system of claim 1, wherein the breathable gas is a medical gas.
3. The system of claim 2, wherein the source is a tank containing the breathable medical gas.
4. The system of claim 2, wherein the breathable medical gas is comprised of oxygen.
5. The system of claim 4, wherein breathable medical gas contains oxygen at a concentration greater than atmospheric oxygen concentration.
6. The system of claim 1, wherein the source is an oxygen concentrator.
7. The system of claim 1, wherein the remote control unit is attached to the valve.
8. The system of claim 1, wherein the remote control unit is detached from the valve.

9. The system of claim 7, further comprising a control signal receiver for receiving an electromagnetic control signal for controlling the valve, wherein the remote control unit is adapted to transmit the electromagnetic control signal.

10. The system of claim 9, wherein the receiver is comprised of a translator for translating the control signal for controlling the valve.

11. The system of claim 9, wherein the electromagnetic control signal is a radio frequency, microwave, infrared, or visible signal.

12. The system of claim 9, wherein the control signal is digital.

13. The system of claim 9, wherein the signal is analog.

14. The system of claim 9, equipped for operation using a plurality of control signal frequencies.

15. The system of claim 14, equipped with frequency hopping capability.

16. The system of claim 1, wherein the remote control unit is a handheld unit.

17. The system of claim 16, wherein the remote control unit is equipped to provide for fingertip adjustment of the rate of gas flow.

18. The system of claim 1, wherein the remote control unit is sound activated unit.

19. The system of claim 18, wherein the remote control unit is equipped to provide for voice recognition adjustment of the rate of gas flow.

20. The system of claim 1, wherein the remote control unit includes a display for indicating gas flow rate.

21. The system of claim 20, wherein the display is a digital display.

22. The system of claim 20, wherein the display is an analog display.

23. The system of claim 1, wherein the remote control unit is effective for controlling the valve to a range of about 10 feet.

24. The system of claim 23, wherein the remote control unit is effective for controlling the valve to a range of about 120 feet.

25. The system of claim 24, wherein the remote control unit is effective for controlling the valve to a range of about 300 feet.

26. The system of claim 1, wherein the remote control unit is effective for controlling the valve to a range equal to or greater than the length of the tube.

27. The system of claim 1, wherein the valve comprises a motor.

28. The system of claim 1, wherein the valve provides a substantially constant flow rate of the breathable gas to the individual.

29. The system of claim 1, further comprising an explosion-proof container containing the valve.

30. The system of claim 1, in electrical connection with a source of alternating electrical current for powering the valve.

31. The system of claim 30, further comprising a backup battery for powering the valve when the source of alternating electrical current is inoperative.

32. The system of claim 30, wherein the valve is manually operative when the source of alternating electrical current is inoperative.

33. The system of claim 1, further comprising a leak detector for detecting for a leak associated with the valve.

34. The system of claim 1, further comprising an additional remote control unit for controlling the valve.

35. The system of claim 34, wherein a single control unit overrides any signal from another control unit for controlling the valve.

36. The system of claim 1, further comprising a gas flow sensor positioned to detect and/or monitor the rate of gas flow to the individual.

37. The system of claim 36, wherein the gas flow sensor represents a component of an error detection system.

38. The system of claim 36, further comprising an indicator for indicating the rate of gas flow detected and/or monitored by the gas flow sensor.

39. The system of claim 38, wherein the indicator is located in the remote control unit.

40. The system of claim 38, wherein the indicator is located in a monitoring station.

41. The system of claim 40, wherein the monitoring station is a nurse workstation for controlling a plurality of valves and is equipped with an indicator for each valve controlled thereby.

42. The system of claim 1, further comprising a means for monitoring the level of physical activity of the individual.

43. The system of claim 42, further comprising an indicator for indicating the level of physical activity monitored by the monitoring means.

44. A method for delivering of a breathable gas to an individual, the method comprising:

(a) directing breathable gas from a source of the breathable gas through a valve and a tube to an individual for inhalation, wherein the valve is adapted for controlling gas flow from the source and is not automatically adjusted according to the level of physical activity of the individual; and

(b) allowing the individual to adjust the rate of gas flow from the source using a remote control unit for controlling the valve independently from any inhalation activity by the individual flow.

45. The method of claim 44, wherein the rate of gas flow is adjusted by the individual to a prescribed flow rate.

46. The method of claim 45, wherein the prescribed flow rate is associated with the individual's need for the breathable gas at rest.

47. The method of claim 45, wherein the prescribed flow rate is associated with the individual's need for the breathable gas with moderate activity.

48. The method of claim 45, wherein the prescribed flow rate is associated with the individual's need for the breathable gas with strenuous activity.

49. A gas regulation system for delivering gas from a source containing a breathable gas to an individual, comprising:

a valve comprised of

an inlet adapted to receive gas from the source,

an outlet adapted to deliver gas to the individual,

a means for altering gas flow from the inlet to the outlet, and

a receiver for receiving a signal for controlling the means for altering gas

flow; and

a remote control unit for transmitting the signal for controlling the means for altering gas flow,

wherein the remote control allows the individual to control the rate of gas flow to the individual independently from any inhalation activity by the individual, and the system excludes any means for automatically adjusting the rate of gas flow from the source through the tube to the individual according to the level of physical activity of the individual.